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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/957,457	09/21/2001	Leif Gustafson	2466-100	2502

23117 7590 09/21/2005

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 ARLINGTON, VA 22203

EXAMINER
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CHARLES, DEBRA F

ART UNIT	PAPER NUMBER
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3624

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/957,457

Applicant(s)

GUSTAFSON, LEIF

Examiner

Debra F. Charles

Art Unit

3624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 11-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/12/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Response to Amendment***

1. Claims 1-10 have been canceled. Claims 11- 29 have been added.

***Response to Arguments***

2. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection. Claims 11 and 16 are not clear. In claim 11, it is not clear if the trading system is for the producers or the customers to use or how related the price information is to the cost of transmission and distribution by of the electricity. The electricity company needs to make a profit from the distribution and transmission of the electricity and price information from the trading floor does not include the final cost of the electricity that the final customer pays. The inventor has not considered this in the method steps. In claims 16 and 25, the claim is not statutory because it just shows manipulation of numbers and not the resulting output. In section 2106(IV)(B)(2)(b)(i) and (IV)(B)(2)(a), the Examiner manual indicates that claims must result in an output to be statutory. Claims 16 and 25 do not show an output or a result of a process. In claim 20, it is not clear what kind of settlement is being performed. In claim 21, it is not clear by whom or what the control equipment refers to.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shepherd(5970479A) and Frew et al.(4803632A).

Re claims 11-29: Shepherd discloses a contract trading system that refers to risk contracts, but is applicable to all contract trading situations(Abstract, col. 4, lines 60-col. 5, line 40, col. 9, lines 40-60, col. 14, lines 5-55, col. 16, lines 40-60, col. 24, lines 20-40, col. 27, lines 45-65, col. 44, lines 30-65, col. 47, lines 5-65, col. 50, lines 40-55, col. 52, lines 55-65, col. 55, lines 20-30, claim 1).

Re claims 11-29: Shepherd disclose(s) the claimed invention except means for connecting each consumer with said price dissemination unit to enable each consumer to receive said price information; and means for enabling each consumer to vary the consumer's electricity consumption based on the received price information. However, in the Abstract, col. 1, line 20-col. 3, line 67 thereof, Frew et al. disclose(s) in accordance with the present invention, a basic utility meter, for example an electric utility meter,

is provided which may be mounted in place of existing meters, which samples current and voltage many times each cycle and accurately calculates real power usage; and also includes a scrolling or cyclic display which selectively includes a plurality of the following displays:

- (8) (1) the meter serial number;
- (9) (2) cumulative kilowatt hours;
- (10) (3) present kilowatts being used;
- (11) (4) current cost or remaining credit in dollars for utility services used;
- (12) (5) "Time of Use" hours and rates;
- (13) (6) power phase angle;
- (14) (7) maximum power drawn (or "Demand") during predetermined intervals;
- (15) (8) clock and calendar;
- (16) (9) water usage/cost;
- (17) (10) gas usage/cost;
- (18) (11) load profiles;
- (19) (12) a power diversion detection indication; and
- (20) (13) power co-generation data.
- (21) The system may also typically include one or more the following equipments or features, which are described in some detail for an electrical meter system, but which would generally apply to gas, water and therms:

(22) (1) A Remote Display Unit (RDU) may be mounted within the customer's home or premises, and may be coupled to the main meter unit in any desired manner, for example, by a power line signaling system. As the display cycles through the scheduled information, the customer may actuate a "hold" switch to retain the desired information on the display for further perusal.

(23) (2) The Remote Display Unit (RDU) may also include a credit card reading facility so that utility charges may be pre-paid or post-paid by credit card.

(24) (3) A meter programmer/reader (MPR) unit may be carried by a meter reader, and the information stored in the meter may be accessed by and/or modified by the meter reader either (a) via an optical probe or (b) through an electrical outlet at the facility permitting inter-unit coupling by power line carrier code.

(25) (4) An optical meter probe (MP) unit is a separate, light weight, self-contained unit which includes random access memory, and can store more information than can be collected by a meter reader in one day's rounds.

(26) (5) The current may be sensed by one or more transformers, encircling either (1) the incoming power line or power bus or (2) one of two or more parallel branches of each incoming power line or power bus, or the current may be sensed by a shunt primarily applicable to D.C. systems, or by a solid state current measuring device.

(27) (6) As a collateral feature, the unit may be placed in a test mode, wherein a special symbol such as an asterisk is moved across the extended multiple digit alphanumeric display at a predetermined proportionality rate corresponding to power being used, comparable to present day meter checking arrangements in which the dot on the rotating induction disk may be viewed and timed in its rotation by the meter tester.

(28) (7) Standardized circuit boards may be employed in the basic meter unit, with selected circuitry in the remote display unit (RDU) and the meter

programmer/reader (MPR) being identical to that in the basic meter unit.

(29) (8) Relatively low cost, reliable digital components may be employed at full utilization by the use of special analog-to-digital conversion control and reading arrangements, whereby the central processing unit (CPU) is not idle while the A/D converter is performing its local active calculation; instead, the CPU is proceeding with its power and other calculation algorithms and/or its other control functions, using voltage and current data from the previous sampling interval. Using this arrangement, a low cost but reliable eight bit CPU may be employed, and power calculated using 12 bit accuracy digitized values of current and voltage,  $162/3$  times per power cycle, or about 1024 times per second; and the relatively complex display functions may also be handled. Gas, water, and therms do not require complex or such frequent calculations.

(30) (9) The meter cover may be formed of nickel-plated steel, to provide electrical shielding, and the reflective outer surface reduces the ambient temperature excursions.

(31) A collateral feature of the invention involves the ease of installation of both the "outside" main unit of the intelligent utility meter and the remote "inside" display and credit card responsive unit. More specifically, in one embodiment, the main unit is provided with a mating base which fits the standard utility meter socket; and the remote "inside" unit only has to be plugged into a wall socket, with communication between the two units being accomplished over the power lines. Accordingly, no special mechanical or electrical installation arrangements are required, thus minimizing change-over expenses, and permitting easy trial installations. Incidentally, as noted above, the basic meter unit may also be mounted on the utility poles, or underground.

(32) The new meter also permits more accurate measurement of power in that pulses of power drawn from the system are accurately measured; and the theft technique of reversing the meter and running it backward will no longer work, as the absolute value of the power is calculated.

(33) Other objects, features, and advantages of the invention will become

apparent from a consideration of the following detailed description and from the accompanying drawings.

It would be obvious to one of ordinary skill in the art to modify the invention of Shepherd based on the teachings of Few et al. The motivation to combine these references is to facilitate direct contact trading of electricity contracts and accurate pricing information to encourage efficient use of electricity.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory

period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Debra F. Charles whose telephone number is (571) 272 6791. The examiner can normally be reached on 9-5 Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent A. Millin can be reached on (571) 272 6747. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit: 3624

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Debra F. Charles  
Examiner  
Art Unit 3624

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VINCENT MILLIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600

A handwritten signature in black ink, appearing to read "Vincent Millin". The signature is stylized with a large, sweeping "V" and a cursive "Millin".